

AN ANALYSIS OF WELL CHILD CARE
INTERVIEW CONTENT

by

Helen Christine Morgan Gillies

A thesis submitted to the faculty of the University
of Utah in partial fulfillment of the requirements
for the degree of

Master of Science

College of Nursing
University of Utah

June 1974

UNIVERSITY OF UTAH GRADUATE SCHOOL

SUPERVISORY COMMITTEE APPROVAL

of a thesis submitted by

Christine Gillies

I have read this thesis and have found it to be of satisfactory quality for a master's degree.

Date

Chairman, Supervisory Committee

I have read this thesis and have found it to be of satisfactory quality for a master's degree.

Date

Virginia O'Neill Hunt
Member, Supervisory Committee

I have read this thesis and have found it to be of satisfactory quality for a master's degree.

Member, Supervisory Committee

UNIVERSITY OF UTAH GRADUATE SCHOOL

FINAL READING APPROVAL

To the Graduate Council of the University of Utah:

I have read the thesis of Christine Gillies in its final form and have found that (1) its format, citations, and bibliographic style are consistent and acceptable; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the Supervisory Committee and is ready for submission to the Graduate School.

Date


May 22 1974


Peggy Chinn
Member, Supervisory Committee

Approved for the Major Department


Bonnie C. Chapman
Chairman/Dean

Approved for the Graduate Council


Sterling M. McMurrin
Dean of Graduate School

ACKNOWLEDGMENTS

I would like to express my appreciation to the many people who contributed to the completion of this study. I would like to thank the members of my committee, Dr. Peggy L. Chinn for her assistance with the design of the study, Dr. Anthony R. Temple for his constructive guidance, and Jinny Hunt for her constant support and encouragement.

In addition, I would like to thank Dr. John Sullivan for his assistance in the statistical interpretation of the data, and Carol Milligan for her cooperation in making arrangements for collection of the data.

Gratitude is also expressed to the physicians, nurses, and patients for their participation in the study, and the staffs of the various clinics for their cooperation and assistance.

Finally, I would like to thank my family for their patience and support during the completion of this study.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iv
LIST OF TABLES	vi
ABSTRACT	vii
INTRODUCTION	1
METHOD	7
RESULTS AND DISCUSSION	13
CONCLUSIONS AND RECOMMENDATIONS	24
APPENDIX A: GUIDELINES FOR CATEGORIZING INTERVIEW CONTENT	27
APPENDIX B: SAMPLE RESPONSES	28
APPENDIX C: NURSE/PHYSICIAN CONSENT FORM	30
APPENDIX D: PARENTAL CONSENT FORM	31
REFERENCES	32
VITA	35

LIST OF TABLES

Table	Page
1. Reliability in Categorization	8
2. Categories in Which Differences Attained Significance	15
3. Categories in Which Differences Did Not Attain Significance	15

ABSTRACT

The present study was designed to increase the amount of data available on content of well child care interviews conducted by physicians and nurses in their expanded role. An effort was made to determine whether observed differences in content emphasis between nurses and physicians were statistically significant.

Comments of public health nurses and intern and resident physicians were categorized in one of 15 categories within a conceptual framework consisting of four major domains--physical, learning/thought, social, and inner--and their intersects. Further description of the comments was provided by such miscellaneous categories as clarification-validation, counseling and guidance, rapport, reassurance, open-ended, antagonistic, and unresponded cues. The number of physicians and nurses above and below the median number of comments for the 36 interviews in each category was incorporated into a 2 X 2 chi-square design to determine significance of the differences.

There were significant differences between nurses and physicians in the following categories. In the total response and counseling and guidance categories, nurses tended to be above and physicians below the median.

Conversely, in the social, 2 (social and inner), 11 (physical, learning/thought, social, and inner), rapport and clarification-validation categories physicians tended to be above and nurses below the median.

Both nurses and physicians tended to emphasize the physical domain and neglect the learning/thought and inner domains, as well as several of their intersects. Maternal questions reflected minimal expectations for comprehensive well child care.

Findings of this study indicate that educational programs intending to prepare health care personnel to provide well child care in the Salt Lake City area should stress the importance of comprehensive health care with particular emphasis on the inner and learning/thought domains.

Future research in this area should include replication of this study using nurses with advanced educational preparation which emphasizes comprehensive well child care. The size of the sample should be increased to amplify the significance of the results.

INTRODUCTION

Ambulatory child health care in the United States is in the process of change. The emphasis is shifting from a preoccupation with disease to a greater concern with comprehensive health. Comprehensive health care of the child is currently defined as the prevention and treatment of physical disease and the supervision of healthy physical and psychological growth and development.¹ Important reasons for regular child health care visits in the absence of specific physical problems include offering anticipatory guidance, supervising developmental progress, helping the family with child rearing problems, and dealing with minor emotional abnormalities or difficulties in family relationships in a preventive way before they assume major proportions.²

Traditionally physicians have provided most of the child health care in the United States. However, the increased demand for health care from all segments of the population, predicted physician shortages, and maldistribution of physicians has prompted the training of allied health care personnel to assist physicians in providing more comprehensive child health care.^{3,4} Among these allied health personnel is the Pediatric Nurse Practitioner

(PNP). This expansion of the nursing role provides a particular potential for delivery of comprehensive child health care because of nursing's traditional emphasis on family-centered care, patient education, and counseling.^{2,5-12}

In order to confirm that nurses could develop the skills necessary for physical assessment of children, numerous studies were conducted in various settings to document the PNP's clinical competence. PNP's trained in Silver's program demonstrated they could provide total care for 85% of all patients seen, which included nearly all well children and almost half of patients with illness or injury.¹³

In another evaluation a preceptorially trained PNP demonstrated competence in performance of well baby examinations and management of 70% of children with skin, respiratory, and ear problems.¹⁴

A walk-in clinic provided the setting for evaluation of the PNP's ability to assess sick children. In a sample of 34 patients seen by the PNP, she sought consultation in 79%--to determine or confirm the diagnosis in 26%, in relation to management of the illness in 41%, and for other procedural matters in 9% of the cases. The high consultation rate in this study was explained in part by the fact that only sick children were evaluated.¹⁶

Another study reported a 93% agreement regarding significance of heart murmurs when 307 pediatric cardiology patients were evaluated by both specially trained PNP's and cardiologists. Fourteen noncardiac problems were identified by the physician, while the nurse recorded 69 such problems not recorded by the physician.¹⁷

Reported acceptance of the PNP by parents and pediatricians has been favorable.^{11,14,16-21} In some cases the PNP's especially impressed parents by showing concern for patients, encouraging questions, and providing explanations more often than physicians did.^{11,17} In other cases they included nonillness-related topics such as growth and development and behavior more frequently than physicians.^{11,16,22} However, in general, parents were equally satisfied with care provided by PNP's and physicians.

Although health care personnel have acknowledged the benefits of comprehensive health care, its fundamental components have not always been reflected in the care delivered. In a study in which self-administered history forms were completed by mothers during routine screening examinations of their children, both somatic and behavioral complaints were recorded. Subsequent attention by physicians was more likely to be recorded in the medical record when the complaints were somatic rather than behavioral.²³

On the other hand, another study reported that

although parents may express psychosocial concerns to personnel during previsit interviews, they do not express these concerns during the well child care visit. Since parents seem not to be cognizant that psychosocial aspects of child care are appropriate topics for discussion during well child visits, the responsibility for introducing and encouraging these topics for discussion currently rests with health care personnel.^{2,3}

In an effort to determine the comprehensiveness of well child care, Korsch et al. studied care provided by physicians and nurses in their expanded role. They reported that both groups emphasized similar interview content. The main foci of their interactions were the physical examination, immunizations, and feeding advice. Nurses as well as physicians adopted the child-centered orientation and avoided opportunities for family-centered assessments. Only a small proportion of each interaction was nonstructured and open-ended. Small provision was made for effective two-way communication and assessment of the mother's resources. Anticipatory guidance and reassurance constituted 10% or less of the interaction.²

In another aspect of the same study, which did not include nurses, physicians were found to lead and guide the interactions, whereas mothers were less likely to initiate conversation or introduce ideas. The opportunity to make

interview content comprehensive was severely limited when communication blocks between patients and physicians were incurred. In such cases, parents tended to give monosyllabic answers and were reluctant to introduce topics they thought might not meet with physician approval. Communication blocks occurred when the physician interrupted the mother to change the subject, when the mother felt the physician ignored her comments, and when the physician seemed to threaten the mother's self-concept. Lack of respect was another deterrent to effective communication in the following examples: when the physician failed to introduce himself, when the physician did not address the mother by name, when the physician nullified the mother's comments by challenging her use of a home remedy or scolded her through the child, and when the physician left the room without indicating his intentions or a closure to the visit.²⁴

Korsch identified several fundamental components of child health interviews which promote effective communication and thereby maintain the opportunity to conduct more comprehensive interviews. First, and of primary importance, is acknowledgment of the mother's own ideas and concerns. Even though all the mother's expectations may not be met, they must be recognized in order to facilitate compliance with the health care plan.²⁵⁻²⁸

Second, a major concern to parents of pediatric patients is causation of their child's illness. Therefore, whenever possible, a clear statement of cause from health care personnel may help relieve parental self-blame, allay anxiety, and prevent overprotective behavior.²⁵

Third, maternal support, praise, and reassurance tend to create an atmosphere conducive to acceptance of guidance and advice without loss of self-respect and confidence. Expressions of negative affect, hostility, tension, and punitiveness by health care personnel are likely to block effective communication.^{24,25}

The present study was conducted in order to increase the amount of data available on the content of well child care interviews. The purposes of the study were to explore the content of well child care interviews conducted by two types of health care personnel in the Salt Lake City, Utah area, and to determine whether there is a significant difference in content emphasis between nurse and physician interviews.

METHOD

The present study was conducted in the pediatric outpatient department of the University of Utah Medical Center and in Child Health Conferences held during March, 1974, in Murray, Kearns, and Salt Lake City. The subjects were intern and resident physicians on rotation through the outpatient department during February and March, 1974, and public health nurses who conduct child health conferences for the Salt Lake City-County Health Department.

Public health nurses were chosen for participation in this study because there are no PNP's functioning in the Salt Lake City area at this time. All seven of the public health nurses have bachelor of science degrees and have participated in a University of Utah continuing education workshop on physical assessment. In addition, they are provided with inservice education programs and on-the-job experience in assessment and implementation.

Patients were selected according to their reasons for coming to the clinics. Included in the study were children seen for well child examinations and health maintenance visits for episodic conditions such as rashes, upper respiratory infections, uncomplicated otitis media or vomiting and/or diarrhea.

Thirty-six interviews, 18 from physicians--6 from two interns and 12 from four residents--and 18 from seven public health nurses, were recorded after obtaining permission from parents, physicians, and nurses. Participants were assured that identifying information would be deleted from the transcripts, and the tapes would be erased upon completion of the study.

Prior to beginning the study, reliability between the investigator and two independent observers, a physician and a nurse, was established when transcripts from two physician tapes and one nurse tape were categorized. Upon completion of the study, reliability was re-established between the investigator and the nurse and physician on a transcript of one nurse tape. (Table 1.)

Table 1
Reliability in Categorization

	Percentage agreement with investigator			
	Physician tape #1	Physician tape #2	Nurse tape #1	Nurse tape #2
Nurse	83	95	80	93
Physician	92	97	87	88

Guidelines were established to assist the investigator in maintaining consistency in categorization throughout the study (Appendix A).

Transcripts of the taped interviews included each comment made by the interviewer (physician/nurse or patient-parent) which elicited a response. Comments were categorized into one of 15 categories within a conceptual framework consisting of four domains--physical, learning/thought, social and inner--and their intersects (Figure 1^{29,30}). The four domains are described in the following paragraphs.²⁹

The physical domain includes the individual's ability to use various motor and neurological capacities to attain mobility and manipulation capabilities, and to physically take care of biological and physiological needs. The child begins totally helpless and immobile, and he grows gradually to the point of total assumption of maintaining physical health and providing for physical performance and mobility.

The learning/thought domain includes the development of language and thought process, of cognitive maps and abstractions, perceptions, and communication capabilities. The child at birth is able to crudely communicate a few basic physiological needs, and he begins to assimilate multiple stimuli which eventually grow into mature conceptualizations and cognitive structures.

The psychosocial domain includes the individual's development of interpersonal relationships, including

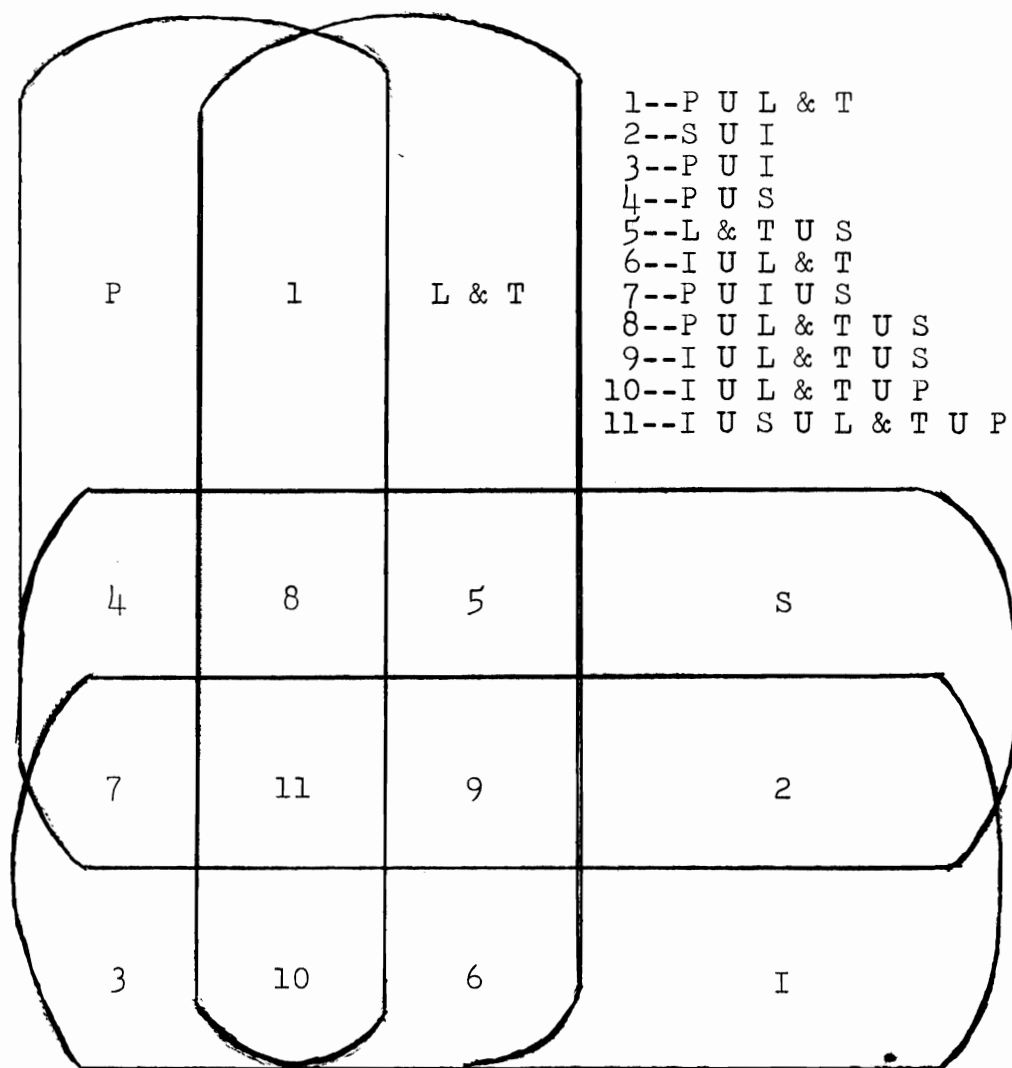


Fig. 1.--Domains and intersects.

affiliations with significant people, peers, and social-cultural interactions with individuals and groups of people. The processes of separation and affiliation constantly interact until an ability is achieved during adulthood which allows the individual to attain security and comfort from a variety of interpersonal relationships.

The inner domain includes the individual's developing awareness of self, and the ability to cope as a separate person with the multitude of factors which influence him, and his acceptance and realization of his self. The child at first experiences himself as part of others, and he is not able to assume responsibility and accountability for his own thoughts, behavior, or being until maturity is achieved. An inner sense of security and of well-being characterizes the healthy individual at any stage of development.

These four major domains develop simultaneously from conception and constantly interact and influence one another. They may be enhanced or degraded by the multiple factors influencing development, and in fact each domain becomes a factor influencing the others.

When each domain is represented by an oval, and these ovals are overlapped as illustrated in Figure 1, the full intersection of the four domains produces 15 categories.³⁰ In addition to the four "pure" domains, there

are 11 areas where portions of the domains intersect each other. Intersect 1 represents where the physical and learning/thought domains overlap. Intersect 2 includes the social and inner domains. Intersect 3 includes the physical and inner domains. Intersect 4 includes the physical and social domains. Intersect 5 includes the learning/thought and social domains. Intersect 6 includes the inner and learning/thought domains. In intersect 7 three domains, physical, inner, and social, overlap. Intersect 8 includes the physical, learning/thought, and social domains. Intersect 9 includes the inner, learning/thought, and physical domains. Intersect 10 includes the inner, learning/thought, and physical domains. In intersect 11 all four of the domains, physical, learning/thought, social, and inner, overlap.

Examples of comments representative of each of the 15 categories may be found in Appendix B.

Further description of the interviewer's comments was provided by the following miscellaneous categories: clarification-validation, counseling and guidance, rapport, reassurance, open-ended, antagonism, and unresponded cues.

Chi-square was computed to determine whether or not there were significant differences between physician and nurse comments in each of the 15 categories.

RESULTS AND DISCUSSION

In order to ascertain whether differences observed between nurses and physicians in the various categories were statistically significant, the median number of comments for the 36 interviews in each category was determined. A 2 X 2 chi-square design, which incorporated nurses and physicians above and below the median, was used to analyze the data in each category and determine significance at the $p < .05$ level.

The tested hypothesis was that the category, physician or nurse, was independent of whether the comments would be above or below the median of the total distribution of comments. This hypothesis is rejected if the X^2 is significant. The distribution of comments was not independent of whether the interviewer was a physician or a nurse in some of the categories.

The data from this study suggest that comments in the total response and counseling and guidance categories tend to be above the median if the interviewer is a nurse and below the median if the interviewer is a physician. Conversely, in the social, 2 (social and inner), 11 (physical, learning/thought, social and inner), rapport and clarification-validation categories, comments tend to be

above the median if the interviewer is a physician and below the median if the interviewer is a nurse. The categories in which differences attained significance are summarized in Table 2. Categories in which differences did not attain significance are summarized in Table 3.

In 9 of the 15 categories--learning/thought, inner, 1 (physical and learning/thought), 5 (learning/thought and social), 6 (inner and learning/thought), 7 (physical, inner, and social), 8 (physical, learning/thought, and social), 9 (inner, learning/thought, and social), 10 (inner, learning/thought, and physical)--and two of the miscellaneous comment categories--antagonism and unresponded cues--comments were too few to determine the χ^2 individually. Therefore, total comments of nurses and total comments of physicians in each of the 36 interviews for these categories were combined, and a single χ^2 was computed.

There was a significant difference between nurses and physicians when total number of comments per interview were compared ($\chi^2 = 4.00$, $p < .05$). The number of comments tended to be above the median in nursing interviews and below the median in physician interviews. These findings indicate that in this sample, nurses made more comments than physicians. In examining the total comments per interview for each group, it is important to note that the

TABLE 2

Categories in Which Differences Attained Significance

Category	X ² *	Professional above median
Total responses	4.00	Nurses
Counseling and guidance	4.00	Nurses
Social	4.00	Physicians
2 (Social and inner)	4.00	Physicians
11 (All)	4.00	Physicians
Rapport	4.00	Physicians
Clarification-validation	7.19	Physicians

* $p < .05$, $df = 1$

TABLE 3

Categories in Which Differences Did Not Attain Significance

Category	X ² *	Professional above median
Physical	1.78	Nurses
11 Combined categories	1.78	Nurses
3 (Physical and inner)	1.78	Nurses
Open-ended	1.78	Physicians
Reassurance	1.78	Physicians

* $p > .05$, $df = 1$

range for nursing comments was from 16 to 128, while the range for physician comments was from 13 to 121. These findings indicate that there is great variation among health care workers in both groups.

The difference between nurses and physicians in the physical and 3 (physical and inner) categories was not significant ($\chi^2 = 1.78$, $p > .05$). However, more nurses tended to be above the median than physicians. This difference might be expected to attain significance if the sample size were increased. Unfortunately, it was not possible to significantly increase the size of the sample in this study because of the shortage of nurses functioning in the expanded role in Salt Lake City at this time.

Comments in the physical category made up a large portion of the total comments in each interview conducted by physicians and nurses. The relationship of physical comments to total comments per interview ranged from 50% to 95% for nurses and from 49% to 87% for physicians. These data concur with findings reported by Korsch et al., which indicated that physical data were a major focus of well child interviews.²

Nurses in this study tended to place greater emphasis on the physical domain and its intersects than did physicians. A possible explanation for this phenomenon might be that nurses have only recently become concerned

with providing primary care in this domain. They are, in some cases, insecure in their physical assessment skills and concerned they may miss some significant sign or symptom. Therefore, their comments often reflect a rather thorough investigation of such topics as diet history, immunizations, past and present physical aberrations.

Physicians, on the other hand, have dealt primarily with the physical domain in the past and are more confident in their skills in this area. Since this study dealt primarily with well children, the physicians' confidence in their performance of a screening physical examination may have been a factor which facilitated creation of a relaxed atmosphere in which more comprehensive topics could be comfortably discussed.

The mothers' questions in this study also were primarily in the physical category. Of 81 maternal questions asked in the 36 interviews, 76 were categorized in the physical category, while 5 were categorized in the inner category. These findings indicate that mothers in this study, as well as those in the study conducted by Korsch et al., tend to have limited expectations for discussion of topics other than physical during well child interviews.

Since public health nurses traditionally have dealt with matters in the social domain, it was surprising to find that in this study the number of physicians who

commented in the social, 2 (social and inner) and 11 (physical, learning/thought, social, and inner) categories tended to be above the median, while the number of nurses who commented in these areas tended to be below the median ($\chi^2 = 4.00$, $p < .05$). Physicians also made more comments categorized as rapport, and more physicians (13/18) introduced themselves than did nurses (3/18). This finding could not be explained by the fact that nurses had seen their patients before because comments made during the interviews were to the contrary.

It has been proposed that nurses (female), because of their sex, are better able to relate to mothers.² If one subscribes to this philosophy, one might expect that male physicians would have to make more comments related to socialization and establishment of rapport than would nurses to accomplish the same purpose. However, this proposal does not account for the number of comments related to the social-cultural aspect of the social domain made by physicians. It seems likely that the physicians in this study make a concerted effort to increase the comprehensiveness and individuality of their well child visits by commenting more in the social category and its intersects.

In examining the 11 combined categories, a noticeable omission by both nurses and physicians occurred in the learning/thought and inner categories as well as in several

intersects which included these domains (Categories 1, 5, 6, 7, 8, 9, 10). Although the difference between nurses and physicians in these combined categories was not significant ($X^2 = 1.78$, $p > .05$), the tendency to comment in these categories was greater among some nurses than physicians.

One factor in the study which might have influenced the health care workers' ability to assess the learning/thought domain is that 22 of the 36 patients examined were under 18 months of age (6 weeks to 18 months). It is difficult to evaluate thought processes, perceptions, and communication capabilities of children in this age group. However, this explanation does not account for the paucity of learning/thought comments since the other 14 patients ranged in age from 2 to 12 years.

Upon closer examination of the inner domain and its intersects, it is obvious that although few comments were made by nurses or physicians in the "pure" domain, comments were made by both groups in Categories 2 (social and inner), 3 (physical and inner), and 11 (physical, learning/thought, social, and inner).

Turning to the miscellaneous comment categories, of particular note is the finding that nurses provided significantly more counseling and guidance than physicians ($X^2 = 4.00$, $p < .05$). This finding indicates that at this

time in this area these nurses are carrying out the patient education responsibilities of their expanded role, although in limited scope.

As may have been expected since a large portion of each interview concerned the physical domain and its intersects, the counseling and guidance provided by both groups pertained mostly to these categories. However, there were nurses and physicians who provided counseling and guidance in some of the other categories, although not to any great extent.

In the clarification-validation category, significantly more physicians were above the median than nurses ($X^2 = 7.19$, $p < .05$). However, the practical significance of this finding is difficult to ascertain objectively. Whether the intention of the interviewer was actually to clarify or validate what the mother said or to avoid a pause while organizing thoughts for the next comment, would be a subjective interpretation in many instances. Representative examples of comments in this category follow.

Physician: What is she eating now?

Mother: Everything.

Physician: Everything, is she eating table foods?

In the previous instance, the physician repeated the mother's comment but requested further clarifying information. However, in the next instance it is difficult to

determine what the intention of the interviewer was for certain.

Physician: Does she cough at night or day or all the time?

Mother: All the time.

Physician: All the time.

Mother: Yes, she just coughs and coughs.

Physician: Has she had any problem breathing?

In some cases, as in the one above, even the voice inflection did not provide definite cues for determination of intention of the interviewer.

The difference between nurses and physicians in the open-ended category did not attain significance ($\chi^2 = 1.78$, $p > .05$). However, physicians tended to be above and nurses below the median. Open-ended questions provided an excellent opportunity to obtain information from all categories. Examples of open-ended questions used by nurses and physicians in this study are included as follows:

1. How has he been doing?
2. What do you do when you are four years old?
3. Are there any other problems?
4. Do you have any questions or concerns about him at all?
5. She is in today for what reason?
6. I see, and what do you think about all that?
7. What seems to precipitate his crying spells?
8. Do you know of any way to resolve that problem?
9. How does this child differ from your others?

10. Do you want to kind of go over what prompted you to consider he had a behavior problem?
11. How was your pregnancy with this baby?
12. How have you felt he is coming along with his development?
13. Do you have any problems at bedtime?
14. Does he have any problem sleeping?
15. Have you noticed any problems with his behavior?

Reassurance was another category in which differences did not attain significance, although physicians tended to be above and nurses below the median ($X^2 = 1.78$, $p > .05$). Since physicians generally are more confident and authoritarian in their role than nurses have been, they may be in a better psychological position to reassure parents than nurses who tend to be somewhat insecure in their new roles. By offering reassurance to parents, health care personnel can reinforce parental strengths in caring for their children. Although parents sometimes seem to request health care personnel to provide solutions for their problems, they often seek reassurance that what they are doing is appropriate. In many situations, by offering help and encouragement, health care personnel may enable parents to work out the best solutions for their own particular problems.

Unresponded cues were absent among the nursing interviews and were found in only two interviews by one physician. Only one physician and one nurse made comments which were considered antagonistic. The following are examples:

Nurse: What do you clean her ears with?
Mother: Cotton swabs.
Nurse: Not a very good idea. Maybe we can find a better way to do that.

Physician: You are acting like a 2-year old.
Really, you are 12 years old, nearly 13.
What is so bad about taking a picture of your leg? Do you think that hurts?

There was another example in the same interview.

Physician: You know what? I get the idea you're trying to hide something from us. Are you trying to hide something? (Scolding tone of voice.)

This comment was made by the same physician in another interview:

Physician: I don't know if that's related to the rash or not, and we some time in the near future want to draw some blood to be sure everything is normal, but we won't do that today, since you have already promised her we wouldn't.
(Scolding tone of voice.)

Since antagonistic comments are believed to be blocks to effective communication, it seems commendable that among the nurses and physicians in this study group, comments in this category were so few.

CONCLUSIONS AND RECOMMENDATIONS

The present study was designed to increase the amount of data available on content of well child care interviews conducted by physicians and nurses in their expanded role. An effort was made to determine whether there were statistically significant differences in content emphasis between nurses and physicians.

The study sample included intern and resident physicians and public health nurses who conducted Child Health Conferences. Patients included in the study were seen for well child care or health maintenance visits for minor episodic conditions.

The interviewers' comments were categorized into one of 15 categories within a conceptual framework consisting of four major domains--physical, learning/thought, social, and inner--and their intersects. Further description of the interviewers' comments was provided by such miscellaneous categories as clarification-validation, counseling and guidance, rapport, reassurance, open-ended, antagonism, and unresponded cues.

The hypothesis tested was that the category, physician or nurse, was independent of whether the comments would be above or below the median of the total distribution of comments in the 36 interviews. A 2 X 2 chi-square

design which incorporated nurses and physicians above and below the median for each category was used to analyze the data. The hypothesis was rejected if the X^2 was significant.

The X^2 was significant in the following categories. In the total response and counseling and guidance categories, nurses tended to be above and physicians below the median. In the social, 2 (social and inner), 11 (physical, learning/thought, social, and inner), rapport and clarification-validation categories, physicians tended to be above and nurses below the median.

Both nurses and physicians tended to emphasize the physical domain and neglect the learning/thought and inner domains, as well as several of their intersects. Maternal questions reflected minimal expectations for comprehensive well child care.

On the basis of the findings of this study, it is strongly recommended that educational programs preparing health care personnel to provide well child care in the Salt Lake City area stress the importance of comprehensive health care with particular emphasis in the learning/thought and inner domains.

For future research in this area, it is recommended that this study be replicated using a sample which includes nurses with an advanced level of education which emphasizes

comprehensive well child care. If possible, the sample size should be increased to amplify the significance of the results.

APPENDIX A

GUIDELINES FOR CATEGORIZING INTERVIEW CONTENT

1. Each comment emitted by the interviewer (health care personnel or child-adult unit) which elicits a response will be categorized.
2. Responses will be categorized according to their relationship to the child-adult unit.
3. Any comment requesting specific memory information will be categorized in a learning/thought intersect determined by content.
4. Comments will be categorized according to total context rather than what possible responses the mother or child might give.
5. When the child is asked his own age, the comment will be categorized in the physical-learning/thought intersect. When the parent is asked his/her age, the child's age, or the ages of other members of the family, the comment will be categorized as physical.
6. Comments related to speech in infancy will be categorized in the physical-social-learning/thought intersect. Speech-related comments in older age groups will be categorized in the social-learning/thought intersect.

APPENDIX B

SAMPLE RESPONSES

PHYSICAL

1. What does she eat nowadays?
2. Has she had any surgeries?

LEARNING/THOUGHT

1. Is she pretty smart?
2. Can you count?

SOCIAL

1. Is this your first child?
2. Were you working before the baby?

INNER

1. Does she have her own personality?
2. She's not too happy today, huh?

(1) PHYSICAL-LEARNING/THOUGHT

1. Do you know how to use the thermometer?
2. How old are you? (Physician asks child.)

(2) SOCIAL-INNER

1. Do you miss working?
2. Does your husband enjoy his work?

(3) PHYSICAL-INNER

1. It's nothing you've done wrong with her.
2. What was it like for you to be pregnant with him?

(4) PHYSICAL-SOCIAL

1. Does he make eye contact with you when you talk to him?
2. It is good to get her into your schedule of meals per day.

(5) LEARNING/THOUGHT-SOCIAL

1. What is your husband going to school for?
2. When you talk to her you're stimulating her.

(6) INNER-LEARNING/THOUGHT

1. Do you like to study?
2. Do you enjoy the subjects you study in school?

(7) PHYSICAL-INNER-SOCIAL

1. Were you expecting a boy or a girl?
2. Does he let you know when he's fussy or hungry or lonely?

(8) PHYSICAL-LEARNING/THOUGHT-SOCIAL

1. Is he making babbling noises?

(9) INNER-LEARNING/THOUGHT-SOCIAL

1. Do you know why he is good when you are there?
2. He knows he belongs to you.

(10) INNER-LEARNING/THOUGHT-PHYSICAL

1. Are you concerned about Johnny's vision affecting his school work?

(11) INNER-SOCIAL-LEARNING/THOUGHT-PHYSICAL

1. What brings you in today?
2. How would you describe her to someone who hadn't seen her or didn't know her?
3. Do you have any questions about him?

APPENDIX C

NURSE/PHYSICIAN CONSENT FORM

I hereby agree to participate in a research study conducted by Christine Gillies, R.N. My participation will consist of:

1. Permitting Mrs. Gillies to tape record health care interviews between myself and consenting families. The recordings will be used exclusively by Mrs. Gillies and her advisory committee at the University of Utah. They will be destroyed upon completion of the written report of the study.
2. Permitting the use of the recorded transcripts in the final written report of the research project. I understand my name will not be divulged and all identifying information will be obscured.

NAME

APPENDIX D

PARENTAL CONSENT FORM

I hereby agree to participate with my child in a research study conducted by Christine Gillies, R.N. Our participation will consist of:

1. Permitting Mrs. Gillies to tape record the health care interview between ourselves and the consenting physician or nurse. The recording will be used exclusively by Mrs. Gillies and her advisory committee at the University of Utah. It will be destroyed upon completion of the written report of the study.
2. Permitting the use of the recorded transcript in the final written report of the research project. I understand our names will not be divulged and all identifying information will be obscured.

NAME AND RELATIONSHIP TO THE CHILD

REFERENCES

1. Solnit, A. J. Psychotherapeutic role of the pediatrician. In Ambulatory Pediatrics, edited by M. Green and R. J. Haggerty. Philadelphia: W. B. Saunders, 1968.
2. Korsch, B. M., Negrete, V. B., Mercer, A. S., & Freemon, B. How comprehensive are well child visits? American Journal of Diseases of Children, 122:483-88, Dec., 1971.
3. Conant, L., Robertson, L. S., Kosa, J., & Alpert, J. J. Anticipated patient acceptance of new nursing roles and physicians' assistants. American Journal of Diseases of Children, 122:202-5, Sept., 1971.
4. Yankauer, A., Connelly, J. P., & Feldman, J. J. Task performance and task delegation in pediatric office practice. American Journal of Public Health, 59: 1104-17, July, 1969.
5. Edwards, J. A., Curtis, J., Ortman, K., Lindsey, P. The Cambridge-Council concept or two nurse practitioners make good. American Journal of Nursing, 72:460-65, Mar., 1972.
6. Austin, G., Foster, W., Richards, J. C. Pediatric screening examinations in private practice. Pediatrics, 41:115-19, Jan., 1968.
7. Feldman, M. Pediatric nurse practitioner's role in a large group practice. Hospital Topics, 50:62-5, Mar., 1972.
8. St. Gene, J. W., Turner, A. B., Peirson, G. S., Gabel, M. C. An experiment with nurse pediatricists. American Journal of Diseases of Children, 122: 198-201, Sept., 1971.
9. Adamson, T. E. Critical issues in the use of physician associates and assistants. American Journal of Public Health, 61:1765-78, Sept., 1971.

10. Andrews, P., Yankauer, A., Connelly, J. P. Changing the patterns of ambulatory pediatric caretaking: an action-oriented training program for nurses. American Journal of Public Health, 60:870-79, 1970.
11. Charney, E., & Kitzman, H. The child-health nurse (pediatric nurse practitioner) in private practice. The New England Journal of Medicine, 285: 1353-58, Mar., 1971.
12. Andrews, P. M., & Yankauer, A. The pediatric nurse practitioner. American Journal of Nursing, 71: 504-8, Mar., 1971.
13. Silver, H. K. Use of new types of allied health professionals in providing care for children. American Journal of Diseases of Children, 116: 486-90, 1968.
14. Chappell, J. A., & Drogos, P. A. Evaluation of infant health care by a nurse practitioner. Pediatrics, 49:871-77, June, 1972.
15. Duncan, B., Smith, A. N., & Silver, H. K. Comparison of the physical assessment of children by pediatric nurse practitioners and pediatricians. American Journal of Public Health, 61:1170-76, June, 1971.
16. Skinner, E. A., & Kahn, L. A comparison between the pediatric nurse practitioner (PNP) and the pediatric resident in an outpatient department: a pilot study. Clinical Pediatrics, 11:142-47, Mar., 1972.
17. Stehbens, J. A., & Lauer, R. M. Pediatric cardiology: a new role for the pediatric assistant. Journal of Pediatrics, 81:394, 1972.
18. Day, L. R., Egli, R., & Silver, H. K. Acceptance of pediatric nurse practitioners. American Journal of Diseases of Children, 119:204-8, Mar., 1970.
19. Spitzer, W. O., Sackett, D. L., Sibley, J. C., Roberts, R. S., Kergin, D. J., Hackett, B. C., & Olynich, A. The Burlington randomized trial of the nurse practitioner. New England Journal of Medicine, 290:251-56, Jan. 31, 1974.

20. Yankauer, A., Tripp, S., Andrews, P., & Connelly, J. P. The outcomes and service impact of a pediatric nurse practitioner training program--nurse practitioner training outcomes. American Journal of Public Health, 62:347-53, Mar., 1972.
21. Chinn, P. L. Parental acceptance of nursing participation in well baby care. Unpublished master's thesis, University of Utah, Salt Lake City, Utah, 1970.
22. Shiramizu, E. M. Comparative study of the nurse and physician giving primary care at the well child conference. Unpublished master's thesis, University of Utah, Salt Lake City, Utah, 1971.
23. Starfield, B., & Borkowf, S. Physicians' recognition of complaints made by parents about their children's health. Pediatrics, 42:855-70, Nov., 1968.
24. Gozzi, E. K., Morris, M. J., & Korsch, B. Gaps in doctor-patient communication, American Journal of Nursing, 69:529-33, Mar., 1969.
25. Korsch, B. M., Gozzi, E. K., & Francis, V. Gaps in doctor-patient communication. Pediatrics, 42: 855-70, Nov., 1968.
26. Korsch, B. M., Freemon, B., & Negrete, V. F. Practical implications of doctor-patient interaction analysis for pediatric practice. American Journal of Diseases of Children, 121:110-14, Feb., 1971.
27. Grant, W. W. The child plus the parent equal 1 patient: an important lesson. Clinical Pediatrics, 8:433-4, Aug., 1972.
28. Francis, V., Korsch, B. M., & Morris, M. J. Gaps in doctor-patient communication. New England Journal of Medicine, 280:535-40, Mar. 6, 1969.
29. Chinn, P. L. Child Health Maintenance: Concepts for Family Centered Care. St. Louis: C. V. Mosby, 1974.
30. Feinstein, A. R. Clinical Judgment. Baltimore: Williams and Wilkins Co., 1967.

VITA

Name	Helen Christine Morgan Gillies
Birthdate	October 4, 1945
Birthplace	Ogden, Utah
Colleges and degrees	University of Utah, Salt Lake City, Utah, B.S. in nursing, 1967
Professional experience	Positions held at Primary Children's Hospital, Salt Lake City, Utah Staff nurse Assistant head nurse Head nurse Supervisor Nurse epidemiologist Pediatric nurse practitioner in Association with Dr. Anthony R. Temple, University of Utah Medical Center
Professional affiliation	American Nurses Association Utah State Nurses Association